Avoidance of administration costs for infused treatments could offset the higher acquisition cost for deferasirox. Additional data is required to confirm efficacy of other treatments in patients with NTDT.

PSY8

THE BUDGET IMPACT OF QUTENZA® FOR THE TREATMENT OF NEUROPATHIC PAIN IN SWEDEN

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OBJECTIVES: Neuropathic pain (NP) is a common disorder which can be chronic, severe, and disabling and is associated with reductions in quality of life and considerable costs. Current first-line treatments for NP include tricyclic antidepressants and anti-convulsants. QUTENZA® is a cutaneous patch that allows rapid dermal delivery of capsaicin directly to the source of pain. The objective of this analysis is to estimate the burden of NP, current treatment costs and the budget impact of introducing QUTENZA® for the treatment of peripheral NP in non-diabetic adults in Sweden. **METHODS:** We constructed a budget impact calculator to estimate the impact of introducing QUTENZA® for 100 people in Sweden. Drug costs for each management strategy are annual costs, based on estimated market shares, and range from SEK 231 to SEK 5,806 (with SEK 3,909 for QUTENZA®). We assumed a 50% uptake of QUTENZA® and a 50% reduction in the use of concomitant medication in the model, based on evidence from real-world data. **RESULTS:** For a NP population of n=100, the cost of current prescribing was estimated at SEK 1.00 million. The cost of alternative prescribing including QUTENZA® was estimated at SEK 1.01 million. The annual cost of treating a patient with QUTENZA® was estimated as SEK 11,941. The estimated cumulative budget impact by year (for 100 patients, with the market share rising from 10% in Year 1 to 100% in Year 5) ranged from SEK 9,664 in Year 1 to SEK 67,949 in Year 5. **CONCLUSIONS:** The introduction of QUTENZA® results in a budget impact of SEK 67,949 for 100 patients over 5 years. This represents a minimal additional expenditure and could be considered good value for money given the added benefits for patients with NP in Sweden.

PSY9

PHARMACOECONOMIC ANALYSIS OF ANTI-INHIBITOR COAGULANT COMPLEX (AICC) IN THE TREATMENT OF INHIBITOR HEMOPHILIA

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OBJECTIVES: To identify the dominant scheme of inhibitor hemophilia bypassing agents therapy (comparing three regimens: Eptacog alfa monotherapy, combination therapy «Eptacog alfa + AICC» and «AICC + Eptacog alfa»). **METHODS:** Based on the crossover clinical research FENOC (Jan Astermark, Sharyne M., Donfield, 2007) the annual cost of treatment by bypassing agents in mild, moderate, severe and life-threatening bleeding is estimated. The analysis of the direct and indirect costs is conducted. Direct costs include the cost of bypassing agents therapy, the cost of emergency medical care, the cost of inpatient and outpatient treatment. Indirect costs include cost of patient's disability, GDP losses caused by mortality and disability, and sick-pay. Value of bypassing agents on demand therapy in three dosing schemes is identified: monotherapy Eptacog alfa (there is no alternative treatment), «Eptacog alfa + AICC» (after the first episode of bleeding no response patients to treatment from Eptacog alfa to AICC transferred) and «AICC + Eptacog alfa» (after the first episode of bleeding no response patients to treatment from AICC to Eptacog alfa transferred). **RESULTS:** Based on the clinical study FENOC, indicated that there is no significant difference in efficacy AICC and Eptacog alfa therapy in patients susceptible to this treatment. An analysis of the direct and indirect costs shows that the costs of the annual course of treatment of 142 patients in Russia are 66 mil EUR, 60,7 mil EUR and 53,1 mil EUR for treatments Eptacog alfa monotherapy, «Eptacog alfa + AICC» and «AICC + Eptacog alfa» schemes respectively. **CONCLUSIONS:** It is determined that the regimen «AICC + Eptacog alfa», will reduce reduces costs relative to the current treatment regimen for 12,9 mil EUR (19,54%) or provide additionally treat of 34 patients of this disease.

PSY10

POTENTIAL FINANCIAL IMPACT OF SUGAMMADEX IN ANAESTHETIC DEPARTMENTS: A BUDGET IMPACT ANALYSIS ON POTENTIALLY SHORT PROCEDURES REQUIRING NEUROMUSCOLAR BLOCKADE

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OBJECTIVES: To evaluate the economic impact on Italian NHS of using sugammadex within anaesthetic departments instead of neostigmine. **METHODS:** The number of procedures using neuromuscular blockings agents (NMBA) potentially eligible for sugammadex was elaborated by hospital discharge data available in Italy for the year 2010. Reduction in postoperative residual curarisation (PORC) rate and saved time allocated to extra procedures were taken from two recent meta-analyses. Costs considered in the analysis were drugs acquisition costs (sugammadex and neostigmine) and PORC management costs. **RESULTS:** Overall annual costs of sugammadex and neostigmine usage result about 34.5 and 31.6 Million Euro, respectively. Sugammadex prevents 99% of PORC episodes on 428,995 procedures; this is associated with savings of more than 30 Million Euro. Also the saved time in surgery procedures due to sugammadex results in an annual savings of 154,867 (36.1%) hours that could be used for further procedures. **CONCLUSIONS:** Sugammadex radically reduces PORC episodes during post-operative and it allows for shorter operating room occupation.

PSY11

THE BUDGET IMPACT ANALYSIS OF DEFERASIROX FOR THE TREATMENT OF IRON OVERLOAD DUE TO FREQUENT BLOOD TRANSFUSIONS IN CHILDREN AND ADOLESCENTS (AGE ≤18 YEARS)

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OBJECTIVES: The purpose of the budget impact analysis (BIA) was to estimate financial consequences of deferasirox (DSX) reimbursement within the health care treatment programme (HTP) on the budget of the National Health Fund (NHF) in Poland. **METHODS:** BIA was performed for a 2-year time horizon (July 2012 - June 2014) from the Polish public payer perspective. The target population qualified to the HTP programme were children and adolescents (age ≤18 years) with iron overload due to frequent blood transfusions. The population was estimated on the basis of medical expert opinion. Two scenarios were compared: the "existing scenario" – without reimbursement of DSX (only standard of care with deferoxamine (DFO) was available) and the "new scenario" – DSX reimbursed as part of HTP. In the analysis, only direct medical costs were included: costs of drugs and their administration, costs of monitoring and costs of blood transfusions. It was assumed that the cost of deferoxamine was included in the cost of hospitalization procedures related to chelation therapy. Due to the lack of available data on adverse events (AE) incidence during therapy with deferasirox or deferoxamine, the costs of AE's treatment were not considered. The calculations were performed in Microsoft Office Excel. **RESULTS:** NHF annual expenditures related to the introduction of deferasirox reimbursement will increase by PLN 454 thousand in the first year and by PLN 434 thousand in the second year of reimbursement compared with the "existing scenario." **CONCLUSIONS:** The positive reimbursement decision for DSX enables patients with iron overload access to safe and effective therapy. Deferasirox therapy will allow young patients to go back to normal functioning in their families and in society. The positive reimbursement decision will also contribute to improving the quality of life, self-esteem and emotional state of the patients.

PSY12

PHARMACOECONOMIC STUDY OF NUTRITION SUPPORT (NS) USAGE DURING INTENSIVE TREATMENT

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OBJECTIVES: To undertake a comparative analysis of 2 methodologies of intensive treatment (IT) , precisely: IT without NS and IT taking into account NS handling. **METHODS:** Pharmacoeconomic analysis "budget impact" was provided. Only direct costs were taken into account: expenses for drug therapy, hospitalization (intensive care unit and medical division) and late complications (pneumonia, sepsis, catheter and wound infection) treatment. Effectiveness data was taken from Russian clinical trial: Popov T.S., Shestopalov A.E., Tsvetkov D.S., Nechaev D.S., Kuz'min M.A. Nutrition Day in intensive care units of the Russian Federation. National association of parenteral and enteral nutrition – Moscow (Russia), 2011. Four types of NS were compared: IT without NS; IT + enteral nutrition (EN); IT + parenteral nutrition (PN) and IT + combined nutrition (CN). **RESULTS:** When carrying out comparative pharmacoeconomic study all calculations were made for 3 groups of patients depending on their health condition: lightly-severe, moderately severe and severe. According to the results of calculations transfer of patients from IT without NS to IT carrying out NS leads to reduction of total expenses, therefore economy of money for the state. Independent from patient health condition – the greatest economy of money arises when EN is used during IT. Further on degree of expressiveness of positive economic effect there is PN and the least NS economic type is CN. **CONCLUSIONS:** The results received during the study were analyzed and the rating of NS types, which were taking part in the research, from the point of view of their clinical efficiency and economic effectiveness for the state budget, was made.

PSY13

A BUDGET IMPACT MODEL FOR NOVOSEVEN FOR THE MANAGEMENT OF BLEEDING EPISODES IN PATIENTS WITH HAEMOPHILIA A TREATED WITH INHIBITORS

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OBJECTIVES: To demonstrate the economic impact of using NovoSeven compared to Feiba for the initial treatment of mild to moderate bleeding episodes in patients with haemophilia A with inhibitors. **METHODS:** A budget impact model was developed based on a previous economic evaluation to calculate the annual budget impact and the treatment cost per episode according to the different treatment strategies. The model presents the costs of the strategies to treat a mild to moderate bleeding episode with up to three lines of treatment, in which the impact parameters are the weight of the patient, the dose, the efficacy and the costs of medication and administration. Three treatment strategies were used: strategy 1: NovoSeven - NovoSeven - NovoSeven, strategy 2: Feiba - NovoSeven - NovoSeven and strategy 3: Feiba - Feiba - NovoSeven. Costs per episode and annual costs were calculated based on local input data on costs and resources and the perspective used was of the Spanish National Health Service (NHS). **RESULTS:** Total costs per patient for one bleeding episode were €10,253, €11,852 and €12,042 for strategies 1, 2 and 3, respectively. Lower total costs per patient with NovoSeven are due to a reduced need for further treatment and associated hospitalisation. Only using NovoSeven saves €23,985 compared to strategy 2 and €26,842 compared to strategy 3 annually. **CONCLUSIONS:** The use of NovoSeven in all three lines of treatment in patients with in haemophilia A compared to using Feiba in the first line of treatment and in the first and second line of treatment saves €1,599 and €1,789 respectively per bleeding episode. This is mainly due to reduced need for further treatment and associated hospitalisation with NovoSeven. Annual cost savings using only NovoSeven are the consequence of lower drug cost and higher treatment efficacy with NovoSeven.

PSY14

PHARMACOECONOMIC EVALUATION OF INTRAVENOUS FERRIC CARBOXYMALTOSE AND IRON SUCROSE IN CORRECTION OF PREOPERATIVE ANAEMIA IN PATIENTS UNDERGOING MAJOR ELECTIVE SURGERY

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OBJECTIVES: To assess the cost-effectiveness of ferric carboxymaltose (FCM) and iron sucrose (IS) in the correction of iron-deficiency anaemia (IDA) before elective major surgery in non-cardiac surgical patients and predict potential budget expenses for the day care services and blood transfusions. **METHODS:** The pharmacoeconomic model was developed based on the data from multicentre prospective study (E. Bisbe et al., 2011) on the efficacy of FCM and IS for correcting preoperative anaemia in patients undergoing major elective non-cardiac surgery. The cost-effectiveness of two intravenous iron formulations was measured as total costs of medicines and day care services per one patient attained iron replenishment or per one patient without IDA at the end of treatment. Budget impact analysis included expenses for the day care services and blood transfusion procedures during intraoperative and/or postoperative period. Sensitivity analysis was performed by including in the model of iron sucrose similars (ISSs). It was considered that treatment with ISSs requires dose increase up to 120-135% of dose of the original IS (E. Lee et al., 2013; J. Rottermbourg et al., 2010). **RESULTS:** The clinical efficacy of FCM was higher compared to that of IS, this was also reflected in better pharmacoeconomic profile of FCM. The CERs were 14,473.61 RUB and 15,222.83 RUB per one patient attained iron replenishment in the FCM and IS groups, respectively. Treatment with FCM was associated with 2.5-fold lower costs of day care services and 2.7-fold lower expenses for blood transfusion procedures. Additional expenses for the day care services were required for patients received ISSs due to increased frequency of injections; this was resulted in the highest CERs in the ISS group. **CONCLUSIONS:** The present study has demonstrated that administration of FCM is economically effective strategy to replenish body iron stores and correct IDA in surgical patients.

PSY15

COST ANALYSIS OF A FIBRIN SEALANT PATCH FOR MILD, MODERATE AND PROBLEMATIC SOFT TISSUE SURGICAL BLEEDING: A HOSPITAL PERSPECTIVE

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OBJECTIVES: Although there are several hemostats available, drawbacks include limitations with efficacy on first attempt and sub-optimal ease-of-use. Literature suggests that more efficacious hemostats may avert hospital resources and offset upfront acquisition costs. A study was conducted to estimate the cost impact of a novel fibrin sealant patch (i.e., EVARREST™) versus standard of care (SoC) in mild-moderate and problematic soft tissue surgical bleeding. **METHODS:** An economic model was developed to quantify 30-day cost impact of EVARREST from a U.S. hospital perspective. Key resources, collected from two trials, included quantity of initial treatment and re-treatment, operating time, hospitalization, transfusion risk, amount transfused, and ventilator utilization. SoC was composed of Surgicel (mild-moderate bleeding) or Surgicel (88%) and conventional methods (12%) (problematic bleeding). The primary analysis included resources clinically related to the significant hemostasis benefit of EVARREST vs. control (i.e., initial and re-treatment, operating time and transfusion). A secondary analysis included all resources collected. Published data on U.S. costs were applied to resource use. **RESULTS:** In problematic bleeding, the primary analysis predicted that EVARREST is cost-savings for the hospital vs. SoC (-$462 USD per patient) with robust one-way sensitivity results (range: -$199 to -$6,212 USD). In mild-moderate bleeding, EVARREST acquisition cost is partially offset with a cost impact of $507 USD per patient (sensitivity range: $175 to $851 USD). Secondary analyses predicted further resource reduction with EVARREST leading to cost-savings (-$5,096 USD per patient) or reduction in cost impact ($233 USD per patient) for problematic and mild-moderate bleeding respectively. **CONCLUSIONS:** This analysis suggests that the hospital cost impact of EVARREST depends on type of bleed. In problematic soft tissue bleeding, EVARREST may result in important cost savings for hospitals, in addition to meeting an important unmet need. Further study in additional populations may be required to confirm findings.

PSY16

COST ANALYSIS OF BYPASSING AGENT PROPHYLAXIS TREATMENT VERSUS ON-DEMAND THERAPY IN HEMOPHILIA A WITH INHIBITOR IN SPAIN

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OBJECTIVES: To estimate the treatment cost of prophylaxis and acute breakthrough bleeds with Activated Prothrombin Complex Concentrate (aPCC) versus on-demand therapy with recombinant Factor VIIa (rFVIIa) for severe hemophilia A (HA) with inhibitor patients, from the Spanish Healthcare System perspective. **METHODS:** A cost-analysis model was used to compare annual cost per patient of aPCC prophylaxis versus rFVIIa on-demand treatment. Cost estimation included prophylaxis pharmaceutical costs (aPCC), on-demand pharmaceutical treatment for bleedings, bleeding events management (excluding factor), surgeries and HA management. Prophylaxis regimen was 75.72IU/kg three times per week. Total dosage for each hemorrhagic event was 673.46µg/kg for rFVIIa and 233.13U/kg for aPCC, annual number of bleedings was 25 for on-demand therapy and 8 for prophylaxis, assuming 69% reduction due to prophylaxis. A baseline bleeding management cost (€2,971) was estimated based on resource use provided by an expert panel for four bleeding sites (joints [62.5%], muscle and soft tissue [28.6%], mucous membranes [3.6%] and other sites [5.4%]). Drug (ex-factory price with mandatory 7.5% rebate) and unitary costs (€, 2013) were obtained from local databases. **RESULTS:** Estimated annual treatment cost of prophylaxis with aPCC (€523,473) was lower than on-demand treatment with rFVIIa (€622,183). Based on the total agent consumption (789,109IU [aPCC] and 1,050,067µg [rFVIIa]) the pharmaceutical cost accounted for €496,350 for aPCC (14.6% on-demand bleedings and 85.4% prophylaxis) compared to €543,866 for rFVIIa (average bleeding cost of €9,062 [aPCC] and €21,556 [rFVIIa]). Yearly bleedings cost was €23,770 for aPCC versus €74,963 for rFVIIa. A baseline cost for HA management (€2,645) and an average cost of surgeries (€708/year) were estimated for both strategies. Results for sensitivity analyses showed cost-savings ranging from €22,525 to €996,384 of prophylaxis with aPCC vs. on-demand with rFVIIa. **CONCLUSIONS:** Three times/week aPCC prophylaxis could reduce 16% the total treatment cost of severe HA with inhibitor, saving up to €98,000/patient/year.

PSY17

RELATIONSHIP BETWEEN BODY MASS INDEX AND HEALTH CARE COSTS BY PLACE OF SERVICE IN EMPLOYED ADULTS

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OBJECTIVES: While previous studies have shown that overweight and obesity are associated with higher costs, less is known about health care costs by place of service (POS) at various levels of BMI. This study measures the impact of BMI as a continuous variable on health care cost at different places of service. POS categories include: pharmacy, doctor's office, inpatient hospital, outpatient hospital or clinic, emergency department, laboratory, and other. **METHODS:** Using 2003-2012 retrospective data from large employers throughout the United States, employees' BMI values were calculated using health risk appraisal data. All study employees were >=18, had >=12 months of health plan coverage after their index BMI screening date, and had no medical claims indicating pregnancy. Employees with BMI<18 (1st percentile) or BMI>47 (99thpercentile) were excluded. Generalized additive models on 12-month post-index POS costs produced estimates of the nonlinear relationship between BMI and cost after controlling for age, gender, marital status, race, salary, zip-code region and index year. **RESULTS:** This study included 71,633 eligible employees; 32.0% were female. The average BMI, age and annual salary were 27.3, 39.8 years and $81,382, respectively. Costs increased significantly with BMI in each POS (P<0.001). Total adjusted annual per-employee health care cost estimates at BMI values of 25, 30, 35, and 45 were $3043, $3932, $4357, and $7248, respectively. Cost estimates by POS at these BMI values were: Pharmacy ($706, $903, $1106, $1372), Inpatient ($398, $678, $643, $2440), Outpatient ($799, $1057, $1113, $1516), Office ($939, $1044, $1174, $1495), Emergency ($131, $159, $200, $186), Laboratory ($34, $38, $46, $43), and Other ($35, $53, $74, $196), respectively. **CONCLUSIONS:** Employees with higher BMI levels incurred more cost at each of the 7 places of service. Because of the high prevalence of overweight and obesity, these costs represent a significant burden for US employers.

PSY18

COHORT ANALYSIS ASSESSING HEALTH CARE COSTS ASSOCIATED WITH OBESITY AT VARIOUS PLACES OF SERVICE IN EMPLOYED ADULTS

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OBJECTIVES: This study determines the distribution of health care costs by place of service (POS; pharmacy, doctor's office, inpatient hospital, outpatient hospital or clinic, emergency department, laboratory, and other) among employees based upon body mass index (BMI). **METHODS:** Using 2003-2012 retrospective data from large employers throughout the US, employees' BMIs from health risk appraisal data defined three main cohorts (BMI<27 [normal weight], 27<=BMI<30 [overweight] and BMI>=30 [obese]). The 27<=BMI<30 cohort was further divided into 3 comorbidity subcohorts: those without diabetes, hypertension or dyslipidemia (NonT2DHtnDys), those with hypertension or dyslipidemia without diabetes (HtnDys), and those with diabetes with or without hypertension or dyslipidemia (T2D). All eligible employees were aged>=18, had >=12 months post-index health plan coverage, and had no pregnancy claims. Annual post-index costs were compared between cohorts and between subcohorts using two-part regression modeling, controlling for age, gender, marital status, race, salary, region, and index year. **RESULTS:** This study included 39,696 (BMI<27), 14,281 (27<=BMI<30), and 18,801 (BMI>=30) eligible employees, with total adjusted health care costs of $3,191, $3,695, and $4,844, respectively. Employees with higher BMI were significantly more likely to incur health care costs in every POS category. Obese employees (BMI>=30) had particularly high inpatient costs compared to other cohorts, averaging twice the cost of the BMI<27 cohort ($919 vs. $431, P<0.05). Total costs among subcohorts of 27<=BMI<30 were $2,863 (NonT2DHtnDys), $5,271 (HtnDys), and $7,594 (T2D). NonT2DHynDys employees had significantly lower health care cost than other subcohorts in every POS category. The T2D subcohort had significantly higher pharmacy, inpatient, doctor's office, laboratory and other health care costs when compared to HtnDys. **CONCLUSIONS:** Employees with higher BMI incurred higher average health care costs than other employees at all places of service. Comorbidities, particularly diabetes, exacerbate health care costs of overweight employees. This represents a significant economic burden for US employers given the high prevalence of overweight and obesity.

PSY19

HAEMOPHILIA A: ANNUAL COST COMPARISON BETWEEN FL-RFVIII AND BDD-RFVIII IN FRANCE: WE SHOULD COMPARE THE COST PER PATIENT INSTEAD OF THE PRICE PER UNIT

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OBJECTIVES: Hemophilia A is rare bleeding disorder where patients have defective or deficient levels of coagulation factor VIII (FVIII). Recombinant FVIII (rFVIII) are manufactured to treat the patients, either as a full-length rFVIII (FL-rFVIII) molecule replicating natural human FVIII or with the B-domain deleted (BDD-rFVIII). It has been suggested that Deletion of B domain had been implemented to improve production profitability. However, this deletion has been shown to induce increase factor consumption by 32.8% in the US (Epstein 2011) and also may increase the risk of developing inhibitors for previously treated patients (PTP) Hazard Ratio=10.8 (Aledort 2011). Both differences can have an important impact on patient health and on the national health care budget. **METHODS:** A Excel-based decision tree model had been developed to compare the overall cost to treat severe haemophilia A patients from a health care system perspective with the most used FL-rFVIII and